

# yumeng ma

HUMAN-AI INTERACTION · ACCESSIBILITY · VISUAL & SOCIAL COMPUTING

✉ yumeng\_ma1@brown.edu | 🏠 yumengma.com | 📺 momentine

## Education

### Brown University

Providence, RI

#### SC.M IN COMPUTER SCIENCE (HUMAN-COMPUTER INTERACTION)

2022 - Present

GPA: 4.0 / 4.0

Coursework: UI/UX, Designing Humanity Centered Technology, HCI Seminar, Collaborative Robotics, Computer Graphics

### Arizona State University

Tempe, AZ

#### B.S. IN COMPUTER SCIENCE AND PSYCHOLOGY

2019 - 2022

Barrett Honors College

GPA: 4.0 / 4.0

Summa Cum Laude

Thesis: "Assessing Exhibit Interaction through Bridging the Connections Between Biometrics and Traditional Tools"

## Publications

\* *Equal Contribution*

### CONFERENCE PROCEEDINGS

Zainab Iftikhar, **Yumeng Ma**, and Jeff Huang. 2023. "Together but not together": Evaluating Typing Indicators for Interaction-Rich Communication. In Proceedings of the 2023 Conference on Human Factors in Computing Systems (CHI '23). *Paper*

Ian Gonsher, **Yumeng Ma**, Ivan Pineda-Dominguez, Matthew Lee, and Yuxin. 2023. The Mixed Reality Passthrough Window: Rethinking the Laptop Videoconferencing Experience. Human Interaction and Emerging Technologies (IHET-AI 2023): Artificial Intelligence and Future Applications. *Paper*

Ian Gonsher, Mandy He, Kevin Hsu, Leon Lau, Arun Kavishwar, Jinha Kang, Maya Fleischer, Li June Choi, Vanessa Chang, Asad Khan, Ray Sun, Sicheng Li, **Yumeng Ma**, Michael Chandler, and Keyu Zhu. 2023. Integrating Interfaces into Furniture: New Paradigms for Ubiquitous Computing, Mixed Reality, and Telepresence within the Built Environment In Proceedings of the 6th Conference on Media Architecture Biennale. (MAB '23). (to appear)

### EXTENDED ABSTRACTS

**Yumeng Ma\*** and Jiahao Ren\*. 2023. ProactiveAgent: Personalized Context-Aware Reminder System. In The 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23 Adjunct). *Paper*

## Research Experience

### Brown University Department of Neuroscience (Paradiso Lab)

Providence, RI

#### GRADUATE RESEARCHER

2023 - Present

- Building a visual prosthesis software to help blind and visually impaired users locate and find everyday objects.

### Brown University (Sonification Project for NASA)

Providence, RI

#### RESEARCH ASSISTANT

2023 - Present

- Collaborating with scientists from the Smithsonian Observatory and NASA to develop a sound and haptic enabled space visualization cross platform mobile app for visually impaired individuals.

### Brown University (Mixed Reality Window Project)

Providence, RI

#### DESIGN RESEARCHER

2022 - Present

- Introducing a new paradigm for the integration of AR into laptop and desktop displays, enabling local users to interact more easily and seamlessly with remote users during videoconferencing sessions.

**University of California Los Angeles (HCI Lab)***Los Angeles CA***RESEARCH INTERN***2023*

- Leveraged LLMs and personal agents to create a proactive reminder and suggestion app by taking in user context, history, and spoken interactions.

**Brown University (Robotic Arm Manipulation)***Providence, RI***STUDENT RESEARCHER***2023*

- Performed and tested text-driven robot grasp tasks with CLIP-feature field in NeRF.

**Brown University (HCI Lab)***Providence, RI***DISTRIBUTED RESEARCH EXPERIENCES FOR UNDERGRADUATES***2022*

- Designed novel typing indicators and found that they enhance user co-presence in written communication through in depth surveys and interviews.

**Arizona State University Department of Psychology (SoLET Lab)***Tempe, AZ***RESEARCH ASSISTANT***2022*

- Conducted testing and evaluation of tutoring systems to optimize learning and educational practices for underrepresented groups.

**NASA Psyche Mission***Tempe, AZ***COLLABORATOR***2021-2022*

- Developed a web app that enabled users to interact with the Psyche Spacecraft model and conducted user studies with biometric data analysis, revealing that the app increased public engagement.

**Professional Experience****Civillience***Remote***PRODUCT MANAGER & UI/UX DESIGN INTERN | LIAISON BETWEEN FRONTEND AND UIUX***2023*

- Leading the UI/UX team to design a web-based app with interactive health data visualizations and create reusable components for the design system to maintain consistency throughout the product.

**Clocky***Remote***SOFTWARE DEVELOPER INTERN***2023*

- Developed a new version of clocky.com using Shopify's Liquid language.

**Awards, Fellowships, & Grants**

- 2023 **Tapia Celebration of Diversity in Computing Conference Scholarship**, Brown University
- 2019 - 2023 **Microsoft DisAbility Scholarship**, Microsoft
- 2022 **Google CS Research Mentorship Program (CSRMP) Fellowship**, Google
- 2022 **Virtual Grace Hopper Celebration (GHC) Scholarship**, AccessComputing

**Teaching Experience**

- Spring '22 **Information Assurance**, TA for Adam Doupe and Tiffany Bao, Arizona State University

**Extracurricular & Work Activities**

- 2022 - Present **Master's Representative**, Brown University CS Diversity Committee *Providence, RI*
- 2021 - Present **Member**, AccessComputing
- 2023 **Student Volunteer**, UIST *San Francisco, CA*
- 2020 - 2021 **Microsoft Support / Xbox Advocate Contract**, Microsoft *Tempe, AZ*

## Skills

---

<b>Programming</b>	Python, C/C++, C#, Java, Unix/Linux, ROS
<b>Web</b>	HTML, CSS, Javascript, Typescript, React, Vue, APIs, Git
<b>Game Dev</b>	Unity, Godot, OpenGL
<b>Data</b>	Jupyter Notebook, MySQL, MATLAB
<b>Design</b>	UI/UX, Adobe Creative Suite, Figma, Wireframing, Fusion360, Blender
<b>Hardware</b>	Arduino, Rasberry Pi